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Lyndon B. Johnson Space Center  
Earth Observations Division  
Attn: Mr. Zack H. Byrns, Mail Code TF6  
Houston, Texas 77058

Subject: Contract NAS9-13304 Monthly Progress Report for the Period  
of 8 March - 31 March, 1973.

General

The subject contract was received on 14 March with an effective start date of 8 March. The majority of the effort for this period (8 March - 31 March) has been devoted to organizing, planning and scheduling the activities to be accomplished during this investigation. A time oriented Milestone Plan was formulated and is being forwarded this date.

Problem Areas

In general, the tasks to be accomplished on this contract are on schedule. There was a slight misunderstanding on our part in regard to participation in the Mission Simulation of 9-13 April. However, this will be resolved by the start of the next Mission Simulation (23-25 April). This investigation and all other S-193 radar altimeter dependent EREP investigations are highly reliant upon the data calibration/correction to be accomplished by Skylab Proposal Number 9627. In addition to receiving corrected data, we anticipate assisting in planning ground truth missions and data correction procedures. However, we have received no formal instructions on the disposition of Skylab Proposal Number 9627. We are currently attempting to convene a meeting between Mr. Byrns (NASA-JSC), Mr. McGoogin (NASA-WS), Dr. Miller (EREP PI), Mr. Murad (EREP PI) and Dr. Brown (EREP CoI) in order to resolve some of the mutual problem areas; however, such a meeting will be useless unless activities on Skylab Proposal No. 9627 are initiated.

Investigation Results

Analysis has been initiated this period to clearly define the minimum ground truth necessary for this investigation. In particular, we are attempting to determine the high wavenumber limit on the waveheight energy spectrum which will permit a good correlation of  $\sigma^0$  as computed from ground

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truth data and as measured by the altimeter. The analytical portion of this effort is essentially complete and we are now in the computation phase. In addition, we have successfully computed the effect of geoidal undulations on the mean return waveform. This information is necessary if we are to separate sea-state and geoidal effects on the mean return waveform. However, much work must still be done to determine if geoidal and sea-state isolation is a problem area.

#### Next Period Effort

In the next month, we will complete computations on waveheight spectral truncation, i.e. what range of wavenumbers must the laser profilometer cover in order to provide adequate ground truth data. We also plan to further attempt to isolate geoidal and sea-state effects. We also anticipate providing information essential to the planning and coordination of ground truth data acquisition. Efforts will also be initiated on determining the adequacy of altimeter pre-flight calibration data, since the paucity of such data could have significant effects on sea-state estimation.

#### Travel Summary and Plans

No travel was undertaken this past period. For the next period, it is expected that the PI and CoI will travel to Wallops Island for a coordination meeting. No other travel is currently planned.

#### Financial Management Report

A financial report for this period is included as Appendix A.

*Gay S. Brown*, Co Investigator  
for Lee S. Miller, Ph.D.  
Principal Investigator